REMARKS

In response to the Official Action mailed January 15, 2004, Applicants respectfully request reconsideration in view of these remarks. In this Response, no claims are added, canceled, or amended so that claims 1-20 remain pending. No new matter has been added.

The present invention provides two-phase request filtering in a firewall system where the first phase performs initial filtering, and the second phase performs filtering in accordance with a protocol specific to the request. This achieves a security advantage over the prior art that does not provide two-phase filtering in accordance with the request protocol, since the number of Internet protocols is increasing, and the number of different types of attacks that can be lodged against a network are also increasing.

Claims 3-4, 6-7, 14-15, and 19-20 were rejected under 35 U.S.C. 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Applicants respectfully traverse this rejection.

The Official Action contends that there is an indeterminate difference in claim scope between these claims and their respective parent claims. However, this contention is erroneous because of the appearance of "at least one of" in the independent claims, whereas the dependent claims recite that every enumerated element is necessary. For example, claim 1 recites the first phase verifies *"at least one of: that the request is pursuant to a supported protocol; that a command of the request is allowable; that a length of the request does not exceed an allowable maximum for the command of the request; that characters of the request are of an allowable type."* By contrast, claim 3 recites simply that the first phase verifies *"that the request is pursuant to a supported protocol; that a command of the request is allowable; that a length of the request does not exceed an allowable maximum for the command of the request; that characters of the request are of an allowable type."* Claim 3 clearly narrows the scope of claim 1 by omitting the "at least one of" and reciting that all of the enumerated verifications are performed. Whereas any single one of the enumerated verifications would satisfy the first phase filtering in claim 1, all of the enumerated verifications are required to satisfy the first phase filtering recited in claim 3. The same is true with respect to claim 5 in relation to claim 6, claim 8 in relation to claim 14, and claim 17 in relation to claim 19.

Moreover, the rejection is similarly erroneous with respect to the second phase filtering of claim 1. Claim 1 recites filtering the request in the second phase to verify *at least one of* the enumerated criteria. By contrast, claim 4 recites filtering the request to verify *all* of the enumerated

2

criteria. The same is true with respect to claim 5 in relation to claim 7, claim 8 in relation to claim 15, and claim 17 in relation to claim 20. Thus, claims 3-4, 6-7, 14-15, and 19-20 are clearly narrower in scope than the claims from which they depend, respectively. Accordingly, the rejection of claims 3-4, 6-7, 14-15, and 19-20 is erroneous and should be withdrawn.

The Official Action rejected claims 1-20 as unpatentable over Shwed et al. (US Patent 5,835,726, hereinafter Shwed) in view of Jade et al. (US Patent 6,061,797, hereinafter Jade). That rejection is respectfully traversed.

The combination of Shwed and Jade fails to teach or suggest all of the limitations of claims 1, 5, 8, and 17. Namely, the combination fails to teach a firewall or computerized system that, in a secondary phase, filters a request *particular to the supported protocol to which the request is pursuant*. The Official Action contends Shwed teaches this feature. However, Shwed merely discloses filtering packets in accordance with a user-defined rule base (see Abstract of Shwed). There is no teaching or suggestion in Shwed that packets are filtered in accordance with the particular protocol by which the request was made. For example, the present invention filters hypertext transfer protocol (HTTP) requests in accordance with HTTP, while filtering file transfer protocol (FTP) requests in accordance with FTP. By filtering requests in accordance with their native protocol, the present invention achieves an advantage over that of Shwed, which filters every packet in accordance with the same set of rules. Because Shwed does not consider the protocol of the request in filtering packets, the combination of Shwed and Jade cannot teach or suggest claims 1, 5, 8, and 17.

Furthermore, the combination of Shwed and Jade fails to teach or suggest *filtering a request in a first phase to verify only at least one of: that the request is pursuant to a supported protocol; that a command of the request is allowable; that a length of the request does not exceed an allowable maximum for the command request; that characters of the request are of an allowable type*. The Official Action contends that Jade teaches this feature of the invention by verifying that a request is a valid one. However, in checking the validity of a request, Jade only verifies that the request is directed to a current valid entry in a trusted sockets table (see column 4, lines 20-22 of Jade). Validity of the recipient is not one of the enumerated verifications performed in phase one filtering of the present invention. Accordingly, Jade does not teach at least one of the enumerated first phase verifications, and cannot be relied upon to support the first phase filtering of claims 1, 5, 8, and 17.

Moreover, a feature that contributes to the robust security of the present invention is the division of filtering into a first phase and a second phase. Neither Shwed nor Jade teaches such a

3

division. Accordingly, there is no obvious way to combine Shwed and Jade to teach the present invention as suggested by the Official Action. Even if one reference teaches the first phase and the other reference teaches the second phase, neither of the references alone or in combination teaches or suggests the division of filtering into two phases, where each phase performs only the enumerated verifications belonging to that phase. If there exists motivation to combine Shwed and Jade, then the combined references only teach both of their respective filtering verifications in a single filtering phase, because dual-phase filtering is neither present nor suggested in either reference.

The combination of Shwed and Jade cannot teach or suggest all of the features of claims 1, 5, 8, and 17 because neither reference teaches nor suggests filtering a request particular to the supported protocol to which the request is pursuant. Nor do the references teach or suggest any of the enumerated verifications of the first filtering phase. Most prominently, neither reference teaches or suggests two-phase filtering at all, regardless of which verifications are performed. The Official Action cannot point to any suggestion or motivation in the references or prior art suggesting dividing firewall filtering into two phases. Thus, the rejection should be withdrawn.

The rejection of claims 3-4, 6-7, 14-15, and 19-20 is not supported with respect to Shwed and Jade. Those claims, which are narrower in scope than their parent claims, are patentable over Shwed and Jade. For example, neither reference discloses verifying that the length of a request does not exceed the allowable maximum for the command of the request. If the obviousness rejection of claims 3-4, 6-7, 14-15, and 19-20 is maintained, Applicants respectfully request an explanation for the rejection, other than being dependent upon a presently rejected base claim. Otherwise claims 3-4, 6-7, 14-15, and 19-20 should be indicated as allowable.

Claim 12 was rejected without support. Applicants respectfully request an explanation for this rejection too, other than being dependent upon a presently rejected base claim.

In summary, Shwed and Jade fail to teach or suggest all of the features of each of claims 1, 5, 8, and 17, as well as their respective dependent claims. There is no motivation to combine the cited references in the manner posited by the Official Action. *A prima facie* case of obviousness has not been established, and the rejection should be withdrawn.

Favorable reconsideration of the application in view of these remarks is earnestly solicited.

Respectfully submitted,

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5